

Appl. No. 10/708,983  
Amdt. dated March 28, 2006  
Reply to Office action of December 29, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**5    Listing of Claims:**

1. (original): A method of fabricating a semiconductor device comprising:

- providing a substrate;
- 10        sequentially forming a first organic layer, a sacrificial layer, and a second organic layer on the substrate;
- performing a photolithography process for forming a predetermined pattern in the second organic layer;
- utilizing the second organic layer as an etching mask for etching the sacrificial layer till a surface of the first organic layer is exposed, thus the predetermined
- 15        pattern being transferred to the sacrificial layer;
- utilizing the sacrificial layer as an etching mask for etching the first organic layer till a surface of the substrate is exposed, thereby the predetermined pattern being transferred to the first organic layer;
- 20        utilizing the sacrificial layer and the first organic layer as an etching mask for etching the substrate, thereby transferring the predetermined pattern to the substrate;
- and
- removing the first organic layer by use of plasma.

2. (original): The method of claim 1 wherein the first organic layer is made of a material
- 25        selected from the group consisting of low dielectric organic materials and spin-on glass (SOG).

Appl. No. 10/708,983  
Amdt. dated March 28, 2006  
Reply to Office action of December 29, 2005

3. (original): The method of claim 1 wherein the plasma is selected from the group consisting of oxygen (O<sub>2</sub>), nitrogen (N<sub>2</sub>), hydrogen (H<sub>2</sub>), argon (Ar), C<sub>x</sub>F<sub>y</sub>, C<sub>x</sub>H<sub>y</sub>F<sub>z</sub>, and helium (He) plasma.
- 5 4. (currently amended): The method of claim 1 wherein the sacrificial layer is made of a ~~material selected from the group consisting of silicon nitride and silicon oxide.~~
5. (currently amended): The method of claim 1 wherein the second organic layer is made of an organic photoresist material capable of absorbing light sources with  
10 wavelengths shorter than 248nm in deep UV regions ~~with a wavelength of 248nm and the less.~~
6. (original): The method of claim 1 wherein the second organic layer is suitable for an e-beam lithography process.
- 15 7. (original): The method of claim 1 wherein the substrate is selected from the group consisting of a silicon substrate, a metal substrate, and a dielectric layer.
8. (new): The method of claim 1 wherein the sacrificial layer is made of silicon oxide.
- 20 9. (new): The method of claim 1 wherein a thickness of the first organic layer is larger than a thickness of the second organic layer.
10. (new): The method of claim 1 wherein the sacrificial layer is removed concurrently  
25 while etching the substrate.
11. (new): The method of claim 1 wherein the first organic layer is clean removed from the substrate by use of plasma.

Appl. No. 10/708,983  
Amdt. dated March 28, 2006  
Reply to Office action of December 29, 2005

12. (new): The method of claim 1 wherein the method further comprises forming an anti-reflection layer on the sacrificial layer before forming the second organic layer.

5 13. (new): The method of claim 12 wherein the anti-reflection layer comprises organic materials.

14. (new): The method of claim 12 wherein the anti-reflection layer comprises inorganic materials.

10